

WHAT IS CLAIMED IS:

1. A fuel tank comprising:  
a tank wall forming a tank body;  
a support member formed within said tank body; and  
functional components which are integrally mounted  
with said support member inside said tank body;  
wherein said support member is clamped in a vertical  
direction of the tank wall between upper and lower inner  
surfaces of the tank wall.

2. The fuel tank according to claim 1, wherein the  
support member includes at least one tank partition  
disposed, and

the tank wall is formed by blow molding of a resin,  
so that the tank partition is clamped between opposite  
inner surfaces of said tank wall in a direction  
substantially perpendicular to a longitudinal direction  
of said tank body.

3. The fuel tank according to claim 2, further  
comprising a coupling member disposed in said tank body  
and extending in a longitudinal direction of said tank,  
and wherein said coupling member couples said tank  
partitions to each other.



4. The fuel tank according to claim 2, wherein an end portion of said tank partition is inserted into a recess formed on said tank wall thereby to be clamped by said tank wall.

5. The fuel tank according to claim 1, further comprising a connecting unit which connects said functional component housed in said tank body to external through a connecting opening formed in said tank wall, said connecting unit including

an external unit having a lid which is thermal-welded to said tank wall to thereby close up said connecting opening, and an outside pipe which penetrates said lid and is connected to external, and

an internal unit having an inside pipe which is connected to said outside pipe, and an lifting mechanism which is attached to said support member and supports said inside pipe in a raiseable and lowerable manner.

6. The fuel tank according to claim 1, wherein said support member is a columnar module which is upstandingly disposed between upper and lower inner surfaces of said tank wall so as to enhance vertical rigidity of said fuel tank.



7. The fuel tank according to claim 6, wherein said columnar module is of cylindrical shape.

8. The fuel tank according to claim 1, wherein said support member has on at least one end thereof a slip-off prevention rib which is embedded in the inner surface of said tank wall to prevent said support member from slipping off from said inner surface of said tank wall.

9. The fuel tank according to claim 1, further comprising an extending tube in which wiring of said functional components is housed and which extends outside said tank body.

10. The fuel tank according to claim 1, further comprising an elastic member provided in said support member, wherein said elastic member urges the upper and lower inner surfaces of the tank wall in a vertical direction of said tank body through said support member.

11. A manufacturing method of a fuel tank which contains a support member in which functional components are integrally disposed in a tank body, said manufacturing method comprising the steps of:

fixing said functional components to a resin base



body to produce said support member;

disposing said support member on an inner periphery side of a tube-like parison formed out of a resin in a semi-melted state in such a manner that a longitudinal direction of said support member is made substantially parallel to a radial direction of said tube-like parison;

clamping said parison from an outer periphery side thereof so that said support member is clamped onto an inner peripheral surface of said parison in the radial direction of the parison;

blowing said parison so as to be press-spread along a container mold; and  
cooling said parison to form said tank body.

12. A manufacturing method of a fuel tank having a tank wall forming a tank chamber, a tank partition disposed in said tank chamber and clamped between opposite inner surfaces of said tank wall in a direction substantially perpendicular to a longitudinal direction of said tank wall, and a functional component attached to said tank partition, said manufacturing method comprising the steps of:

assembling said tank partition with said coupling member to form a support member;

attaching said functional component to said tank



partition;

setting one end of said support member in a blow molding machine;

covering an assembled body with a parison;

mold-clamping a mold and molding said tank wall by a pressurized gas into said parison; and

sealing an opening portion of said parison.

13. A method of manufacturing said fuel tank, according to claim 12, further comprising the steps of,

forming a connecting opening in an upper wall of said tank wall,

pulling up said internal unit supported by said lifting mechanism,

connecting said outside pipe of said external unit to said inside pipe of said internal unit through said connecting opening, and

welding said lid to said tank wall to close up said connecting opening.

14. A method of manufacturing said fuel tank according to claim 11, further comprising the step of,

generating an elastic force in a longitudinal direction of said support member to thereby urge an inner periphery side of said tank body.



15. A method of manufacturing said fuel tank according to claim 11, wherein when said support member is clamped onto an inner peripheral surface of said parison, said support member urges inner periphery side of said parison in a longitudinal direction of said support member.

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